

ABSTRACT

To provide a novel gene and protein involved in multidrug resistance in cancer, to elucidate functions of the gene and protein, to provide methods of detecting the gene and antibody against the protein and of testing and diagnosing cancer using the gene and antibody, we found a novel protein (RB1CC1) or polypeptide and gene thereof present in nucleus of human or animal cells and having transcription factor functions and/or functions inducing expression of retinoblastoma-1 gene (RB1 gene) or the gene product. We determined the amino acid sequence and cDNA sequence, conducted gene amplification and detection with primers hybridizing with the gene, tested for expression and mutation of the gene, discovered the gene relates to cancer cell proliferation and assayed cancers, prepared antibody against the protein and detected the protein using the antibody, whereby we found a relation between the protein and cancer cell proliferation, and assayed cancers.